



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/629,006 | 07/29/2003 | Paul Adams | BIC-016 | 7341 |

29626 7590 05/25/2007
THE H.T. THAN LAW GROUP
WATERFRONT CENTER SUITE 560
1010 WISCONSIN AVENUE NW
WASHINGTON, DC 20007

| |
|----------|
| EXAMINER |
|----------|

LEE, KEVIN L

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3753

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

05/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/629,006 | Applicant(s) ADAMS ET AL. | |
| | Examiner KEVIN L. LEE | Art Unit 3753 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36, 39-50 and 99-114 is/are pending in the application.
- 4a) Of the above claim(s) 4, 8-11, 17-21, 24, 26, 31-33, 35-44 and 48-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 12-16, 22, 23, 25, 27-30, 34, 45-47 and 99-114 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed May 8, 2007 has been thoroughly reviewed and considered by the examiner. Applicant's arguments with respect to the rejection(s) of claim(s) 1-3, 5-7, 13, 14, 22, 23, 25, 27-29, 34, 45, 46, 99-104 and 107-114 under 35 U.S.C. 102(e) as being anticipated by Soucy; Claims 12 and 47 under 35 U.S.C. 103 as being obvious over Soucy; Claims 15, 16, 105 and 106 under 35 U.S.C. 103(a) as being obvious over Soucy in view of Powell et al; Claim 114 under 35 U.S.C. 103(a) as being obvious over Soucy in view of Kojak and Claims 101-109 and 111-113 under 35 U.S.C. 103(a) as being obvious over Powell et al in view of Soucy have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Wong (U.S. Patent No. 5,634,505) and Lechner (U.S. Patent No. 4,911,194).

In view of the new ground(s) of rejection as follows, applicant's request that the withdrawn claims 4, 8-11, 17-21, 24, 26, 31-33, 35-44 and 48-50 is denied. The finality of the prior Office action is withdrawn in view of the new grounds of rejection. The indicated allowability of claim 30 is withdrawn in view of the newly discovered reference(s) to Lechner. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, 7, 12, 15, 16, 22, 23, 25, 27-29, 46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Wong (U.S. Patent No. 5,634,505). The patent to Wong discloses a valve coupling comprising first and second valve component (24, 26) connected at one end to a fuel supply (16) via fuel line (22) and to a fuel cell (18) at the other end. The valve coupling components each include biased slidable inner bodies (96, 84); see col. 6, lines 7-32.

Claims 1-3, 5-7, 12, 15, 16, 22, 23, 25, 27-30, 34 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Lechner (U.S. Patent No. 4,911,194). The patent to Lechner discloses a coupling used to supply fuel from a tank or container to a fuel cell adapted to provide electricity (gas grill), col. 1, lines 29-48. The coupling (134) includes a first and second valve component (135, 136), with each valve component including a biased slidable inner body (59) biased by a spring (58); see Figures 2 and 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3753

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechner. Lechner teaches that the coupling can be connected to a suitable fuel source such as a "tank, container or some other vessel," col. 1, lines 29-34. It is well known in the art to supply fuel to a device via a cartridge or fuel line. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coupling of Lechner to include a cartridge or fuel line as an alternate means of supplying fuel to the device.

Claims 13, 14, and 99-113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lechner in view of Powell et al. The spring constant of the spring (58) is the same for each valve of Lechner. The patent to Powell et al teaches providing different spring constants for each of the springs of the slidable valve bodies so that one valve opens before the other valve, col. 4, lines 9-18. In view of the teaching of Powell et al, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coupling of Lechner by providing a lower spring constant of the spring in the valve component connected to the fuel cell than the spring constant of the spring in the valve component connected to the fuel supply so that the valve of the fuel cell opens before the valve from the fuel supply opens so that the flow of fluid from the fuel supply is delayed upon coupling the valve components.

Claims 13, 14, and 99-113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Powell et al. The spring constant of the springs is the same for each valve of Wong. The patent to Powell et al teaches providing different spring constants for each of the springs of the slidable valve bodies so that one valve opens before the other valve, col. 4, lines 9-18. In view of the teaching of Powell et al, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coupling of Wong by providing a lower spring constant of the spring in the valve component connected to the fuel cell than the spring constant of the spring in the valve component connected to the fuel supply so that the valve of the fuel cell opens before the valve from the fuel supply opens so that the flow of fluid from the fuel supply is delayed upon coupling the valve components.

Claim 114 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Lechner or Wong in view of Kojak, III. The fuel supply of either Lechner or Wong lacks having a removable covering member. The patent to Kojak, III teaches providing a removable covering member (122) for a male coupler (24), col. 4, lines 26-28. In view of the teaching of Kojak, III, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the valve apparatus of either Lechner or Wong to include a removable covering member to protect the fuel supply coupler from damage or contamination when the fuel supply coupler is not in use.

Art Unit: 3753

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN L. LEE whose telephone number is (571) 272-4915. The examiner can normally be reached on MONDAY-THURSDAY.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ERIC KEASEL can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAY 23, 2007


Kevin Lee
Primary Examiner